variSys PC3440
Installation Manual

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Contents

Radio Frequency Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna or device.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

USA Notification

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1 Safety Instructions

The system described in this manual is for exclusive operation by trained employees. Only qualified personnel that know the potential dangers involved should perform the installation, settings, maintenance and repair of the units used.

Operational Safety
The correct and safe use of these systems assumes that operating and service personnel follow the safety measures described in the manual alongside the generally acceptable safety procedures.
If there is a possibility that safe operation cannot be guaranteed the system must be switched off and secured against accidental use. Then the service unit responsible must be informed.

Condensate / Change of Temperature
Moving the systems from a cold to a warm environment could lead to dangerous situations due to condensation. Therefore it must be ensured that the system can adjust itself to the warmer temperature.

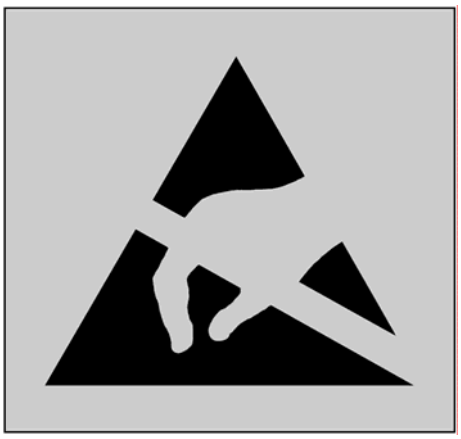
Do not open the housing
There is no need to open the housing in order to set any ILR unit. No unit has any internal setting elements or displays. All settings are performed using software via the Service Interface.

Earthing
Before establishing any connections the housing of the system must be earthed.

Connections / Power Supply
The power supply circuit must comply with the requirements of the SELV circuits (see EN 60950).
The signal circuits must comply with the requirements of the SELV circuits (see EN 60950).
Use screened cables for all signal cabling cabling. This is the only way to achieve the prescribed EMC.

Connection to a network (e.g. Ethernet)
Do not connect any device to your network before it has been configured. Before connecting it your network, check that the desired IP address has been set. A device may have any factory-set IP address. A device with the wrong settings may impede the functioning of your network.

Electrostatic Discharges



This product contains components that are sensitive to electrostatic discharges. Please observe the special instructions for their protection. Incorrect handling can damage the unit and cause the invalidation of the warranty.

Never use measuring units with low impedance for measuring or testing systems with semi-conductor components. Never use high voltage testing units or dielectric test units to test systems with semi-conductor components. When it becomes necessary to check the isolating properties of the field wiring, the assemblies (electronic units and sensors) should be disconnected. Earth the test units.

Minimum safety precautions against electrostatic discharge:

- Establish earth contact before you touch the unit. For example, touch the earthing screw on the unit. Even better: Use an antistatic ribbon and earth yourself permanently for the time you handle the unit.
- Avoid unnecessary contact with the unit connectors and assemblies inside the unit.
- Only open the unit if the operational settings (as described in the manual) expressly require this.
- Use antistatic tools for the setting of the unit. (Warning: Do not touch life-threatening voltages with these tools).
- Do not store unit and components without protective packaging.
- Only remove unit and components from the packaging immediately prior to installation.

These notes are not sufficient to guarantee complete protection from electrostatic discharges! We recommend the use of suitable protective equipment.

IDENTEC SOLUTIONS does not accept returns of products where the regulations concerning the ESD precautions and protective packaging materials were not followed.

2 Introduction

2.1 Foreword

Scope of this Document

This document is the hardware description and installation manual of the hardware of the Auto-ID system variSys.

Responsibility

IDENTEC SOLUTIONS is not responsible for any errors occurring in this document.

Preparations

This installation manual must be read carefully prior to starting the installation. The described installation works assume that installation materials like cable, antenna and data tag holder etc are available.

Notes and Warning

Special Notes and Warnings appear throughout the entire manual.
NOTE is used to detail correct operating or maintenance procedures in order to prevent damage or destruction of the system.
WARNING indicates potential danger sources that require correct procedures to avoid injuries.

2.2 Scope of Delivery—Visual Inspection

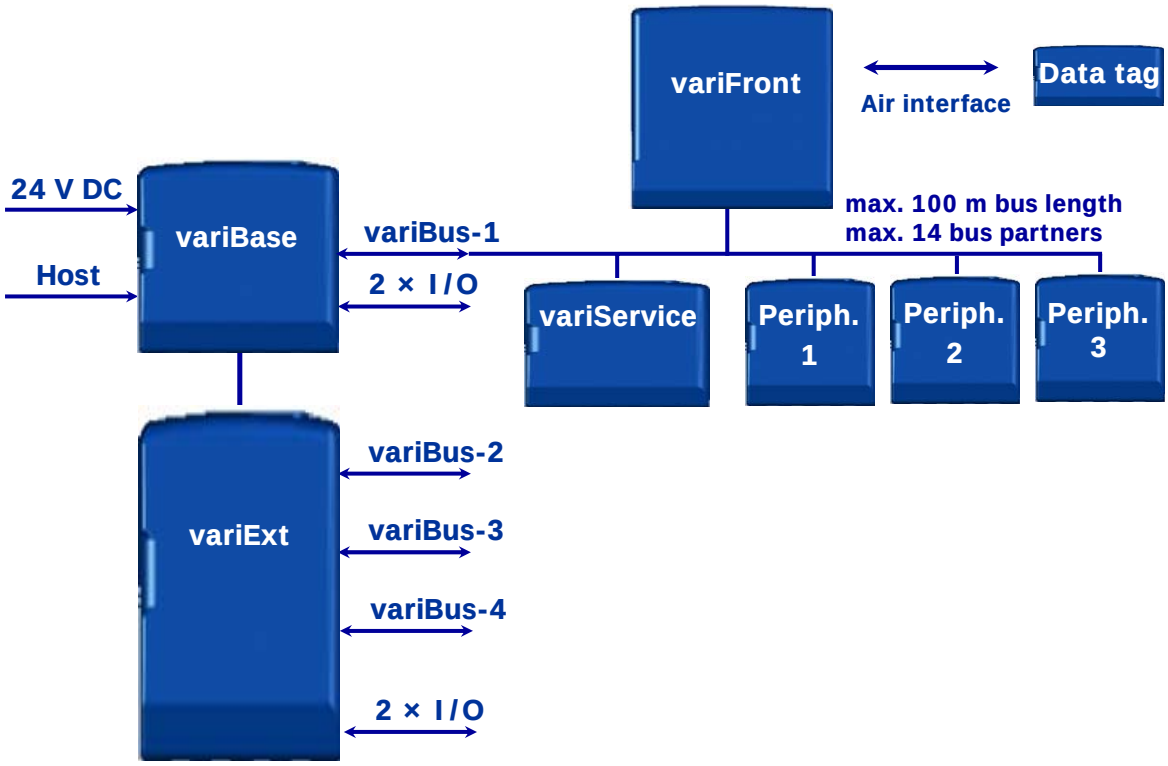
Check delivery whether it is complete and for any damages. If the delivery is not complete or damaged immediately inform the carrier. The dispatch and service organization of IDENTEC SOLUTIONS should also be informed to facilitate the repair or exchange of the system.

2.3 System Description

The new ID system platform »variSys« from IDENTEC SOLUTIONS combines current and future ID technologies. No matter if RFID, optical systems or whatever the future will hold, »varisSys« integrates up to 4 ID technologies of the same or of different kind to one central unit. The actual ID technology is comprised in separate convertible frontends. As an alternative compact units are also available.

2.3.1 The variBus

The »variBus« connects up to 4—different or same—ID systems (frontends) to one central unit. This offers you all functionality combined in one single host interface. Moreover additional accessory units can be connected to the »variBus«. The »variBus« is not only the data link between all bus partners, but also the central power supply of all bus partners. Furthermore custom-specific modules are possible.



14 Partners per »variBus«

- 1 frontend
- 1 service module
- up to 12 peripheral units (digital IO, display, keypad, emergency stop).

2.4 Components

2.4.1 Overview

Central Unit variBase-LCD

The central unit bundles data from up to 4 ID locations and provides communication to your host system at one host interface.
Dimensions (B × H × T): 138 × 162 × 61,5 mm
Mass: ca. 800 g

Central Unit variBaseExt-LCD

Expanded central unit with 4 »variBusses« and 4 digital IOs. With it one may connect up to 4 frontends and up to 48 accessory units in total.
Dimensions (B × H × T): 199 × 162 × 72 mm
Mass: ca. 1 kg

Frontend variFront-2.24

Reads and writes the semi-active IDENTEC SOLUTIONS OIS-P data tags of series PC3000, PC3100 and PC3400 in the 2.4 GHz Band.
Dimensions (B × H × T): 138 × 162 × 61,5 mm
Mass: ca. 920 g
Communication range: up to 3 m

Compact Unit PC3440

Reads and writes the semi-active IDENTEC SOLUTIONS OIS-P data tags of series PC3000, PC3100 and PC3400 in the 2.4 GHz Band.
Dimensions (B × H × T): 138 × 162 × 61,5 mm
Mass: ca. 920 g
Communication range: up to 3 m

2.4.2 variSys Compact Units PC3440

PC3440-SER

- Compact unit for read and write of semi-active OIS-P data tags
- Interfaces: RS232/422/485, Protocols: Eurox43, 3964R
- Order code: 101 012

PC3440-PFB

- Compact unit for read and write of semi-active OIS-P data tags
- Interface: Profibus-DP/V1
- Order code: 101 013

PC3440-IE

- Compact unit for read and write of semi-active OIS-P data tags
- Interface: Ethernet
- Order code: 101 014

PC3440-PN

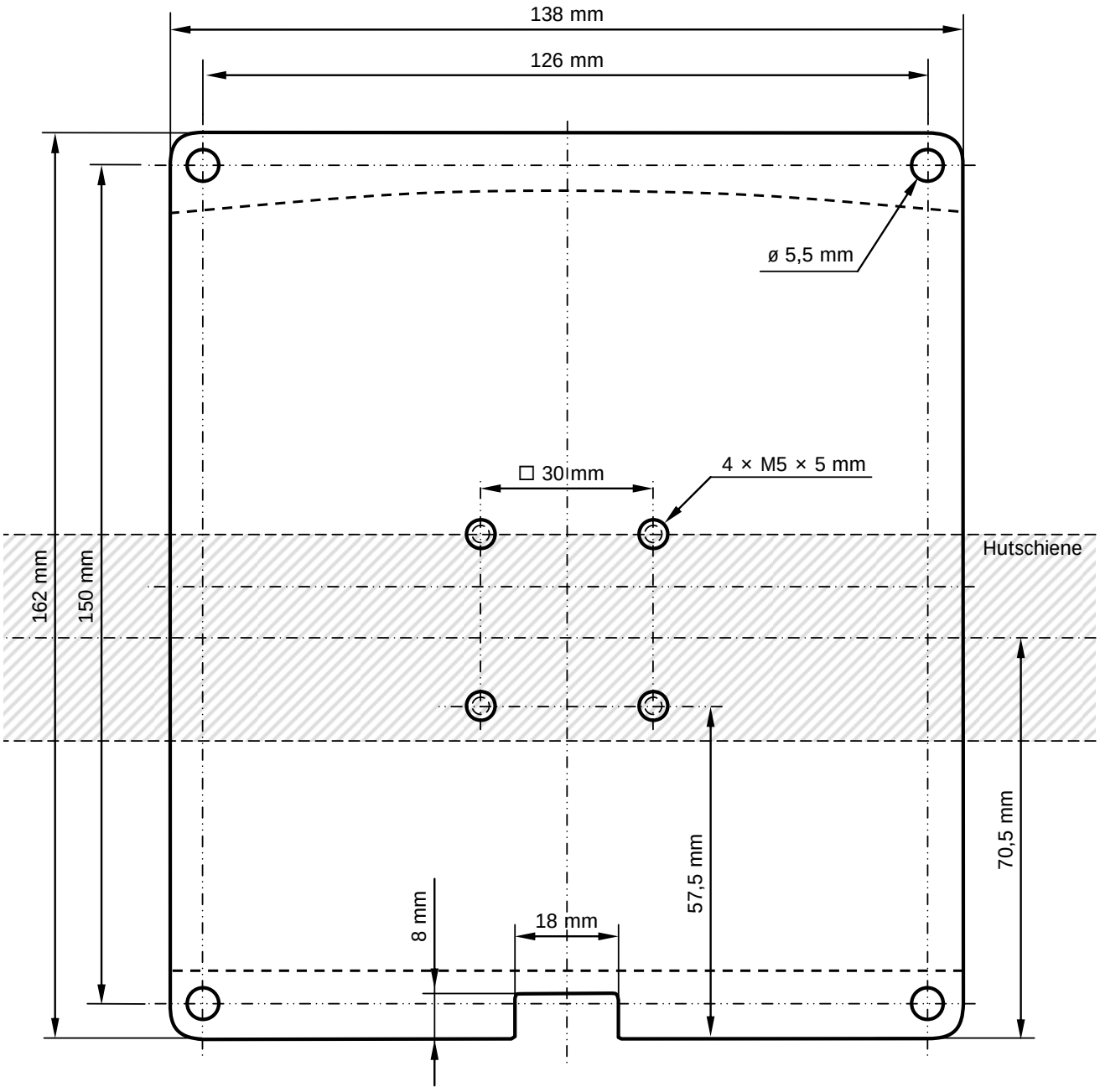
- Compact unit for read and write of semi-active OIS-P data tags
- Interface: Profinet
- Order code: 101 015

2.5 Glossary

SELV	Safety Extra Low Voltage
EMC/EMV	Electro-Magnetic Compatibility
ESD	ElectroStatic Discharge
variBus	Internal Bus of the »variSys« that links up to 14 bus partners. The central unit variBase can operate up to 4 busses.
variBase	Central unit of the »variSys« with one variBus to operate one variFront ID unit.
variExt	Expansion module for the central unit »variBase«. Using this, there are 4 BIBusses available for up to 4 same or different »variFront« ID units.
variFront	Generic term for all front-ends, that is ID units such as an EPC reader or optical code readers.
variService	Special service module. Can be attached 1 times to a BIBus.
variTag	Selected data tags for variSys.

3 Installation

3.1 Mechanical Installation



Dimensional drawing of units variBase, PC3340 and variFront-2.4

The 4 tapped blind holes M5 are suitable for direct mounting of base clamps from Rose + Krieger for pipe diameters from 12 - 18 mm.

3.2 Electrical Installation

3.2.1 Safety Notes

The power supply circuit must comply with the requirements of the SELV circuits (see EN 60950).
The signal circuits must comply with the requirements of the SELV circuits (see EN 60950).
For all cabling screened cable must be used. Only in that way the required EMC is achieved.

3.2.2 Adapters for Replacement with existing OIS-P Units

variAdapt-SER/A

- Adapter of existing serial connection RS232, RS422/485 and current loop of an OIS-P PC3340-SER/A to a variSys device, length: 0,2 m
- Order code: 101 159

variAdapt-SER

- Adapter of existing serial connection RS232, RS422/485 and current loop of an OIS-P PC3340-SER to a variSys device, length: 0,2 m
- Order code: 101 270

variAdapt-PFB

- Adapter of existing Profibus-DPV1 connection of a PC3340 with Profibus connectors to a variSys device, length: 0,2 m
- Order code: 101 160

variAdapt-IE

- Adapter of existing Ethernet connection (e.g. OIS-P PC3340-IE) to a variSys device, length: 0,2 mm
- Order code: 101 161

variAdapt-PWR

- Adapter of existing power supply connection (e.g. OIS-P PC3340-SER/A) to a variSys device, length: 0,2 m
- Order code: 101 162

3.2.3 Connection Cables

Power Supply

variCable-033000-PWR

- With straight female connector and free wires, standard cable, 3 m long

variCable-063000-PWR

- With straight female connector and free wires, standard cable, 6 m long

Digital IO

variCable-031000-IO

- With straight male connector and free wires, standard cable, 3 m long

variCable-061000-IO

- With straight male connector and free wires, standard cable, 6 m long

variCable-032000-IO

- With angled male connector and free wires, standard cable, 3 m long

variCable-062000-IO

- With angled male connector and free wires, standard cable, 6 m long

variBus

variCable-101300-Bus

- With straight male connector and straight female connector, standard cable, 10 m long
- Order code: 101 183

variCable-102300-Bus

- With angled male connector and straight female connector, standard cable, 10 m long
- Order code: 101182

Serial Host

variCable-031000-SER

- With straight male connector and free wires, standard cable, 3 m long

variCable-061000-SER

- With straight male connector and free wires, standard cable, 6 m long

Industrial Ethernet

variCable031000-IE

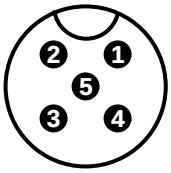
- With straight male connector and free wires, standard cable, 3 m long

variCable061000-IE

- With straight male connector and free wires, standard cable, 6 m long

3.2.4 Power Supply Pinout (Power)

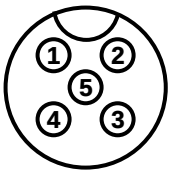
Male connector M12 × 1, “A” coded



Pin	Description	Wire Color
1	+24 VDC	Brown
2	IO 1	White
3	0 V	Blue
4	IO 2	Black
5	PE (Earth)	Grey

3.2.5 variBus Pinout

Female connector M12 × 1 in “A” coded



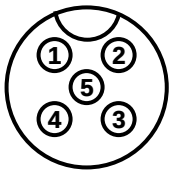
Pin	Description	Wire Color
1	+24 VDC	Brown
2	variBus B	White
3	0 V	Blue
4	variBus A	Black
5	PE (Earth)	Grey

Technical Data of variBus

General	• Bus data rate: 16 Mbits/s max. • Maximum cable runs: 100 m in total Daisy-chained symmetrical data bus and power supply bus with auto-termination and automatic recognition of bus partners.
Power Supply	• Central unit variBase or compact units: 24 VDC Bus partners are supplied via the variBus, no other power supply is needed.
Connector	M12 × 1 connectors with standard sensor pinout (“A” coding) For use in paint shops IDENTEC SOLUTIONS recommends using Lumberg cables. These are free from substances that might impair surface wetting in the coating process.
Protection Class	The cables provide a protection class of IP67.

3.2.6 Digital IO Pinout

Female connector M12 × 1, “A” coded



Pin	Description	Wire Color
1	+24 VDC	Brown
2	IO 1	White
3	0 V	Blue
4	IO 2	Black
5	PE (Earth)	Grey

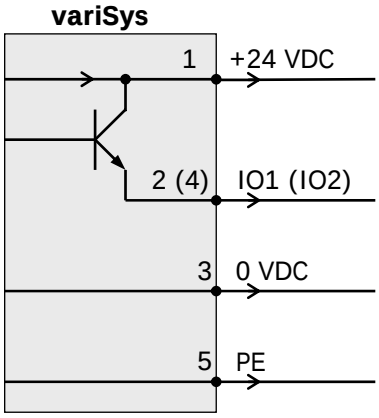
The central unit variBase provides 2 connections that can be independently configured either as input or output. The 2 inputs/outputs are parallel available on both connectors for power supply and digital IO. The expansion variExt brings another pair of this connections that can be used either as input or output.

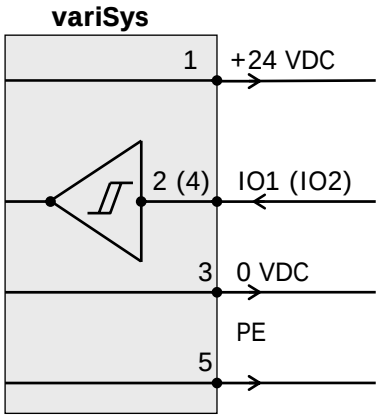
Operating as output

The output switches the operation voltage supplied to the variSys. The output cannot switch to 0 VDC.
Maximum current drain: 60 mA

Operating as input

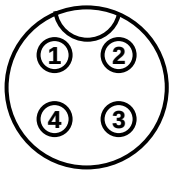
Logical on: > 9 VDC
Logical off: < 6 VDC
Maximum input voltage: 36 VDC





3.2.7 Ethernet Pinout (PC3440-ETH)

Female connector M12 × 1, “D” coded



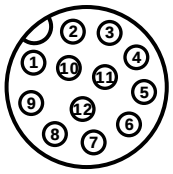
Pin	Description	Wire Color
1	TX+	White/orange
2	RX+	White/green
3	TX–	Orange
4	RX–	Green

Warning

Do not connect any device to your network before it has been configured. Before connecting it your network, check that the desired IP address has been set. A device may have any factory-set IP address. A device with the wrong settings may impede the functioning of your network.

3.2.8 Serial Pinout (PC3440-SER)

Female connector M12 × 1, “A” coded

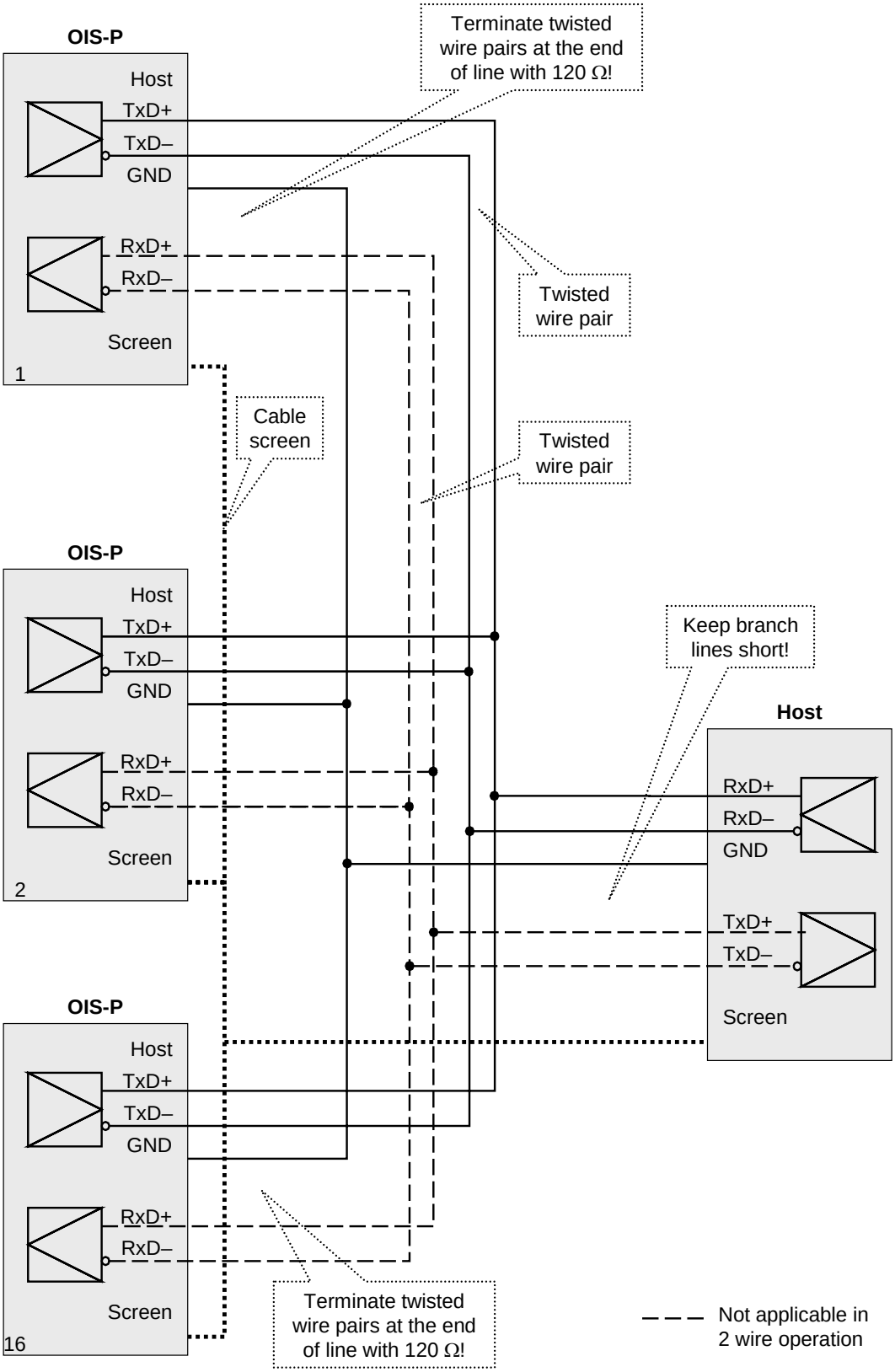


Pin	Description	Wire Color
1	RS422 B	Brown
2	RS422 B (4 wire, TxD–), RS485 B (2 wire, TxD–)	Blue
3	RS422 A (4 wire, TxD+), RS485 A (2 wire, TxD+)	White
4	20 mA cathode, input current loop passive –	Green
5	20 mA anode, input current loop passive +	Rosary
6	20 mA emitter, output current loop passive –	Yellow
7	20 mA collector, output current loop passive +	Black
8	RS232 TxD	Grey
9	RS232 RxD	Red
10	RS422 A	Violet
11	RS232 GND	Grey/rosary
12	+5 VDC Interface	Red/Blue

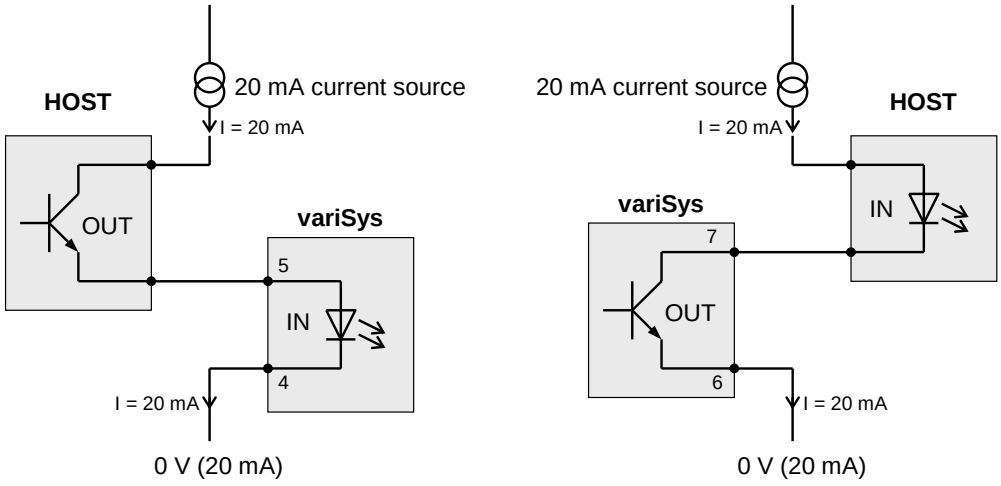
Warning

Only connect interfaces that will be in use. Do not connect unused interfaces.

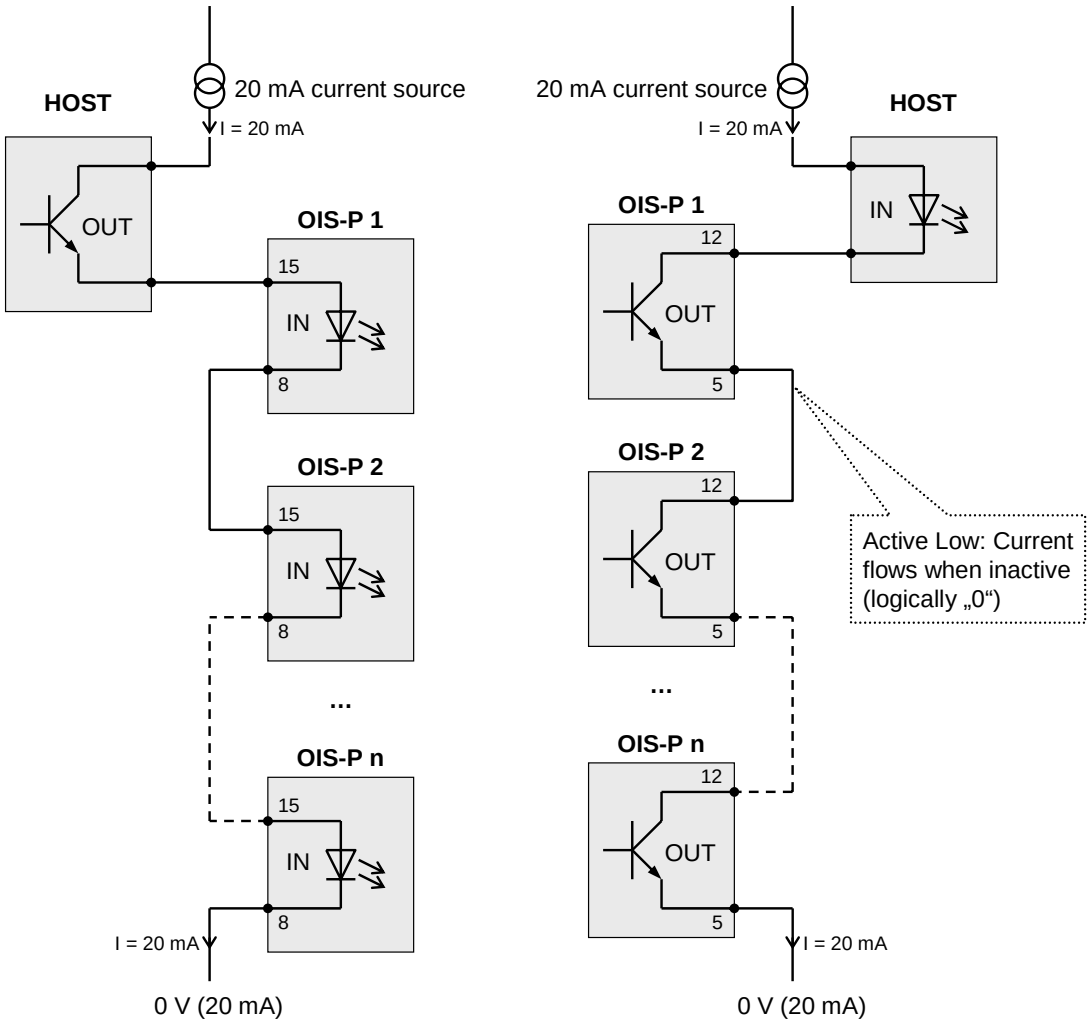
Wiring of RS422/485



Wiring of Current Loop (TTY)



Wiring of Current Loop (TTY) in Multi-Drop Mode



4 Initial Operation

Warning

Do not connect any device to your network before it has been configured. Before connecting it your network, check that the desired IP address has been set. A device may have any factory-set IP address. A device with the wrong settings may impede the functioning of your network.

Configuration

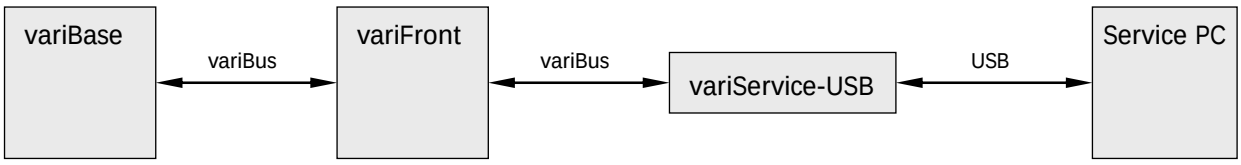
Tools required:

- IBM compatible PC running Windows OS
- variService-USB (variBus-USB converter)
- Configuration Software variService-User (pls. see following table)
- Depending on unit suitable adapter cable (pls. see following table) or

Unit	Interface	Host Adapter Cable	Software
PC3440-SER	RS232/422/485	Adapter an COM-Port (RS232)	variServiceUser, IdentMaster*
PC3440-PFB	Profibus		variServiceUser
PC3440-IE	Ethernet	M12-RJ45-Ethernet-Adapter	variServiceUser, Browser, IdentMaster*
PC3440-PN	ProfiNet	AIDA-RJ45-Ethernet-Adapter	variServiceUser, Browser

* This test software is available in German and English

variService-USB



5 Maintenance

5.1 Precautionary Maintenance

In principle, the Auto-ID system variSys is maintenance-free. When correctly installed it operates for many years without any problems. Regular checking of all ports and cables belonging to the system is recommended.
Unstable connections could lead to damage and malfunctions of the system and therefore should be repaired as soon as possible.

Checklist for regular checks

- Are all casing intact?
- Are all cables intact?
- Are all connectors intact?
- Are all connectors securely fastened?
- Are all screws still tight?
- Is there suddenly a malfunction at a specific unit?

5.2 Batteries in System Components

5.2.1 Batteries in Central Units and Compact Communicators

The CPU boards inside of central units and compact communicators embody a battery for memory retention of configuration and protocols. Furthermore they operate the RTC of the device. If the devices are powered up no battery capacity will be consumed. So with continuously powered up devices the battery lifetime relates to the maximum shelf life of at least 10 years.
But also with powered off devices (spare parts on stock) the calculated lifetime of the battery exceeds 10 years. In the rare case that devices stored for years can't store a configuration non-volatile contact us for a battery replacement.

5.2.2 Batteries in Data Tags

After a battery replacement the data tag has to be initialized. Also (as with your watch) gaskets must be exchanged, so the casing remains reliably sealed according to demands. A test should be done. Therefore we recommend to let IDENTEC SOLUTIONS do the battery replacement. We not only test the function of the electronics, but also the tightness of the casing and further mechanical properties.

How to recognize that the battery needs to be replaced?

The residual battery capacity is automatically checked each time there is a communication with a data tag. In the status information sent to the host the battery status is reported. If the condition “Battery low” is indicated to the user control system the remaining battery capacity is 5 % and the data tag should be removed as soon as possible and a new battery inserted.

It is not imperative to immediately remove the Data Tag from operation once the Low Battery warning is received. Depending on the closed-loop cycle time, the tag may remain in operation until the end of its current cycle, whereby it is removed from the asset. Replace the battery, dispose of the used battery according to local regulations and the tag is ready to be re-used.

As a precaution the battery can also be exchanged after a certain operation time.
Note: The indication of a low battery at temperatures below zero is not reliable. If this message appears with temperatures below zero do not draw any conclusions.

How often needs the battery to be replaced?

The typical battery lifetime in most industrial environments should be at least 4 – 10 years depending on the type of the data tag and the operating conditions mentioned on the data sheets of the data tag. For customer-specific conditions IDENTEC SOLUTIONS can calculate a simulation. The long-term load with high temperatures should be avoided.

5.3 Firmware Update

The firmware is stored in a FLASH memory an can be updated.

5.4 Spare Parts

Recommended spare parts stock

In order to keep the down time of the system during malfunctions as short as possible it is recommended to have certain spare parts in stock.
At least one central unit, one antenna and one antenna cable should be available. With larger systems with more than approx. 15 central units the doubling of the recommended stock quantity should be considered. Furthermore, it is recommended to have several spare tags in stock, corresponding to approx. 0.5 – 1 % of the total number of tags.

Preparing the spare parts

In general all spare parts can be used immediately after delivery from IDENTEC SOLUTIONS. However, for the compact communicator there are various settings of the communication parameters.
In order to keep the down times short it is recommended to set these parameters before the component is entered into the spare part stock system. In most cases all units within an identification system are used in the same way so that only one setting is required.

5.5 Repairs, Returns

The data tags and compact communicators are complex electronic power units on which the customer cannot carry out repairs. Don't try to repair units or open the housing.

Electronic parts or main components returned for repair or exchange must be handled with great care.
PCBs or electronic parts must be returned in the appropriate ESD-protecting packaging material.
If you send parts for repair, please add a short error description at least. This helps us to do the repair fast.

IDENTEC SOLUTIONS Deutschland GmbH
Customer Service
Hertzstrasse 10
69469 Weinheim
GERMANY/ALLEMAGNE

6 Technical Data

All values are specified at 20 °C, unless otherwise noted.

6.1 Operating Data

Compatibitliy	Compatible with OIS-P data tags of series PC3000 (e.g. PC3005/21F), series PC3100 (e.g. PC3103/01, PC3104/22A, 32A, 33, PC3105/00E, F & G) and series PC3400 (e.g. PC3404/M32A, PC3405/M8A)
Status Information	Status information is shown by the LEDs on the front panel and can be read from the host computer. Furthermore are extended status and diagnostic functions transmitted over the variBus to an optional service module.
Communication Range	0 – 3 m (adaptive power management or configured)
Transmit Power	max. 25 mW EIRP, factory preset: 10 dBm
Frequency	2,402 ... 2,480 GHz (software adjustable)
Host Protocols	EUROX43, 3964R, CCS

6.2 Mechanical Data

Dimensions	138 × 162 × 61,5 mm (W × H × T)
Mass	App. 920 g
Materials	Backplane of aluminum, cover of impact resistant ABS (alkylbenzenesulfonate)

6.3 Environmental Conditions

Temperature Range	-40 to +70 °C (storage) 0 to +60 °C (operation)
Protection Class	IP65 (suitable for outdoor applications), the cables provide a protection class of IP67, Ref.: IEC 529
Vibration	EN60721-3-3 class 3M2
EMC, Approvals	All units of »variSys« comply to the EC guideline 99/5/EC (R & TTE**)

6.4 Electrical Data

Power Supply

- 24 V DC ±10 %, max. 8 Watts, female connector M12 × 1, “A” coded

Host Connectors

- PC3440-SER female connector M12 × 1, “A” coded
- PC3440-PFB female connector M12 × 1, “B-invers” coded
- PC3440-IE female connector M12 × 1, “D” coded
- PC3440-PN 2 × AIDA*

IO Connector

Female connector M12 × 1, “A” coded. In total 2 configurable inputs or outputs, direct connection of sensors is possible.

Output

- Switches variSys supply voltage
- Maximum current drain: 60 mA

Input

- Logical on: > 9 VDC
- Logical off: < 6 VDC
- Maximum input voltage: 36 VDC

VariBus

System specific high speed bus, auto-terminating, female connector M12 × 1, “A” coded.
For use in paint shops IDENTEC SOLUTIONS recommends using Lumberg cables. These are free from substances that might impair surface wetting in the coating process.

* Automatisierungsinitiative Deutscher Automobilhersteller—Automation Initiative of German Automobile Manufacturers
** R & TTE—Radio and telecommunications terminal equipment

Konformitätserklärung gemäß dem Gesetz über Funkanlagen und Telekommunikationsendeinrichtungen (FTEG) und der Richtlinie 1999/5/EG (R&TTE)
Declaration of Conformity in accordance with the Radio and Telecommunications Terminal Equipment Act (FTEG) and Directive 1999/5/EC (R&TTE Directive)

IDENTEC SOLUTIONS Deutschland GmbH

Hersteller /Verantwortliche Person // The manufacturer / responsible person
erklärt, dass die Produkte declares that the products

PC3440-SER, PC3440-IE

Type (ggf. Anlagenkonfiguration mit Angabe der Module):
Type (if applicable, configuration including the modules)

		Telekommunikations(Tk-)endeinrichtung Telecommunications terminal equipment		**X**	Funkanlage Radio equipment

Short Range Device	**RFID Reader**	**1**
Verwendungszweck Intended purpose		Geräteklasse Equipment class

bei bestimmungsgemäßer Verwendung den grundlegenden Anforderungen des § 3 und den übrigen einschlägigen Bestimmungen des FTEG (Artikel 3 der R&TTE) entspricht.
complies with the essential requirements of §3 and the other relevant provisions of the FTEG (Article 3 of the R&TTE Directive), when used for its intended purpose.

Gesundheit und Sicherheit gemäß § 3 (1) 1. (Artikel 3 (1) a))
Health and safety requirements pursuant to § 3 (1) 1. (Article 3(1) a))

angewendete harmonisierte Normen ... Harmonised standards applied...	Einhaltung der grundlegenden Anforderungen auf andere Art und Weise (hierzu verwendete Standards/Spezifikationen) ... Other means of proving conformity with the essential requirements (standards/specifications used)...
EN 50357(2001-10) **EN 60950-1 (2001) +A11(2004)** **+Corrigendum(2004)**	

Schutzanforderungen in Bezug auf die elektromagn. Verträglichkeit § 3 (1) 2, (Artikel 3 (1)b)
Protection requirements concerning electromagnetic compatibility § 3 (1) 2, (Article 3 (1)b)

angewendete harmonisierte Normen Harmonised standards applied...	Einhaltung der grundlegenden Anforderung auf andere Art und Weise (hierzu verwendete Standards/Spezifikationen) ... Other means of proving conformity with the essential requirements (standards/specifications used) ...
ETSI EN 301489-1 V1.6.1(2005-09) **ETSI EN 301489-3 V1.4.1(2002-08)**	

IDENTEC SOLUTIONS Deutschland GmbH D-69469 Weinheim Hertzstr. 10

Maßnahmen zur effizienten Nutzung des Funkfrequenzspektrums
Measures for the efficient use of the radio frequency spectrum

| **X** | Luftschnittstelle bei Funkanlagen gemäß § 3 (2) (Artikel 3 (2))
Air interface of the radio systems pursuant to § 3 (2) (Article 3 (2))

angewendete harmonisierte Normen Harmonised standards applied	Einhaltung der grundlegenden Anforderung auf andere Art und Weise (hierzu verwendete Standards/ Schnittstellenbeschreibungen)... Other means of proving conformity with the essential requirements (standards/interface specifications used)...
ETSI EN 300440-1 V1.3.1(2001-09) **ETSI EN 300440-2 V1.1.1(2001-09)**	

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ppa. Josef V.

Weinheim, 3. Dezember 2007
Place & date of issue

Josef Vogel, VP Technology OIS
Name and signature

CETECOM ICT Services GmbH
Untertürkheimer Strasse 6-10, D-66117 Saarbrücken, Germany

Conformity Assessment Body
Recognized Certification Body for Japan

認証書 TYPE- BASED CERTIFICATE

特定無線設備の種類 Classification of specified radio equipment:	**Article 2, Clause 1,Item 8** **Specified low-power radio equipment for identification of moving objects**
電波の形式、周波数及び空中線電力 Type of emissions, frequency and antenna power	**A1D** **2429-2468 MHz(0-13 ch)** **0.001 W**
型式又は名称 Model Name:	**PC-3440**
製造者名 Manufacturer Name:	**IDENTEC SOLUTIONS Deutschland GmbH**
認証番号 Certified Number:	**202YJ08562291**
認証をした年　月　日 Certified Date:	**2008-07-04**

上記のとおり、電波法第 38 条の 24 第 1 項の規定に基づく認証を行ったものであることを証する。
This is to certify that the above-mentioned certification by type has been granted in accordance with the provisions of Article 38-24, Paragraph 1 of the Radio Law.

Cetecom ICT Services GmbH
Lothar Spitzer

Signature:

Recognized by
The Ministry of Internal Affairs and Communications(MIC)

CAB ID: 202

Deutscher Akkreditierungs Rat
DAR

TTI-P-G 081/94-D0